Boundary value problem boundary conditions. (Boundary value problem)	4	M1RA 16:3)

TOVMASYAN, N. Ye.

Dissertation defended for the degree of Candidate of Physicomathematical Sciences at the Joint Scientific Council on Physicomathematical and Technical Sciences; Siberian Branch

"Several Boundary Problems for the Trikomi Equation and the Laplace Equation Under Discontinuous Boundary Conditions."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

CIA-RDP86-00513R001756420009-7" **APPROVED FOR RELEASE: 04/03/2001**

\$/199/63/004/002/008/013 B112/B234

AUTHOR:

Tovmasyan, N. Ye.

TITLE:

Boundary value problems for Tricomi's equation with discontinuous boundary conditions

PERIODICAL: Sibirskiy matematicheskiy zhurnal, v. 4, no. 2, 1963, 391-407

TEXT: The equations $y^{m} \partial^{2} u / \partial x^{2} + \partial^{2} u / \partial y^{2} = 0$ (-2 < m < \infty) $\partial^2 u/\partial x^2 + y^m \partial^2 u/\partial y^2 = 0$ (2<m<\iiii) are considered in a connected domain D whose boundary C consists of the interval -1 \(\xi y \xi 1 \) and a Jordan curve o joining the points A(-1,0) and B(1,0). The boundary data are assumed to be discontinuous at a finite number of points of the interval AB. Theorems of existence of solutions are derived which may be regarded as generalizations of known theorems concerning Tricomi's equation. In addition, the point singularities of the solutions to the equation $\partial^2 u/\partial x^2 + \partial^2 u/\partial y^2 + (k/y)\partial u/\partial y = 0$ (3) on the axis y = 0 are investigated.

SUBMITTED: July 22, 1961

Card 1/1

TOVMASYAN, N.Ye.

Some boundary value problems for Laplace's equation with discontinuous boundary conditions. Sib. mat. zhur. 5 no.1: 174-185 Ja-F 164. (MIRA 17:7)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

\$/0199/64/005/001/0174/0185

AUTHOR: Tovmasyan, N. Ye.

ACCESSION NR: AP4012349

TITLE: Certain boundary-value problems for the Laplace equation with discontinuous boundary conditions

SOURCE: Sibirskiy matematicheskiy zhurnal, v. 5, no. 1, 1964, 174-185

TOPIC TAGS: Laplace equation, boundary value problem, boundary condition, discontinuous boundary condition, Dirichlet problem, Neumann problem

ABSTRACT: The paper considers the Dirichlet and Neumann problems for the Laplace equation in an n-dimensional region D, when the boundary conditions have singularities on a closed and uniformly dense set Γ of points on the boundary S. The solutions of the Dirichlet and Neumann problems under such boundary conditions are sought in a class of functions which are continuous everywhere in a closed region D, except perhaps at points of the set Γ , and having on Γ singularities of specified form. In such a class of functions, the homogeneous Dirichlet and Neumann problems have an infinite number of linearly independent solutions. These problems are of importance in the study of electromagnetic fields or heat distribution. The paper also gives supplementary conditions for the solution of the Dirichlet problem, which ensure the existence and uniqueness of the solution in this class Card 1/2

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756420009-7

ACCESSION NR: AP4012349

of functions. Finally, analogous questions for the Neumann problem are considered. During the course of the article, 8 theorems are proven. "The author would like to thank A. V. Bitsadze and S. A. Tersenov for their valuable comments on reading of the manuscript." Orig. art. has: 27 numbered equations.

ASSOCIATION: none

SUBMITTED: 20Ju162

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: MM

NO REF SOV: 003

OTHER: 001

Card 2/2

TOWNSYAN, N.Ye.

Some boundary value problems for systems of elliptic equation of the second order on a plane. Toki. AN DASE IND. no. 01.275-1776
F '65.

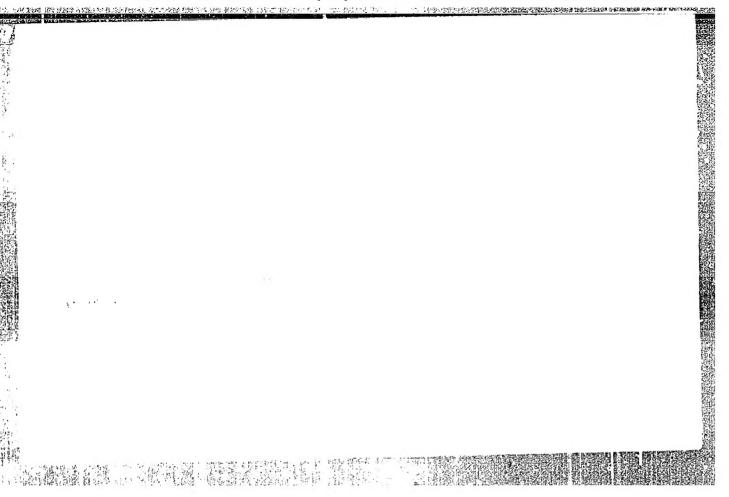
1. Institut matematiki Sibirskogo otdeleniya AN SOME. Submitted August 10, 1964.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

TOVMASYAN, N.Ye.

A boundary value problem for an elliptic system of differential equations of the second order on a plane. Doct AN Arm. 257 AC no.2:65-69 166.

1. Submitted August 28, 1964.



THE DESIGNATION OF THE PROPERTY OF THE PROPERT

denotal condition (1), (2) to be Noetherian in any simply connected region. If his condition is violated, then he proves that there is a region of arbitrarily smooth boundary in which (1), (2) is not Noetherian, even if f is infinitely differentiable. Orig. art. has: 9 formulas.

TOVMASYAN, N. Te.

Some boundary value problems for systems of elliptic equations of the second order not satisfying IA.B. Lopatinskii's constition. Dokl. AN SSSR 160 no.5:1028-1031 f 165.

(MIEA 18:2)

1. Institut matematiki Sibirskogo oldeleniya AN SSSR. Cubmitted August 10, 1964.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

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CIA-RDP86-00513R001756420009-7

SOURCE CODE: UR/0199/66/007/004/0920/0938 $\operatorname{sat}(a)/\operatorname{sat}(1)$ I. 10h37-67 51 ACC NIC A16033117 AUTHOR: Tovmasyan, N. Yo. TITLE: Dirichlot problem for the olliptic systems of differential equations of the second order which do not satisfy the Yu. B. Lopatinskiy condition SOURCE: Sibirskiy matematicheskiy zhurnal, v. 7, no. 4, 1956, 920-938 TOPIC TAGS: elliptic differential equation, vector function ABSTRACT: The author discusses the twice differentiable in the region D solution of $L(u) = Au_{xx} + 2Bu_{xy} + Cu_{yy} + a(z)u_x + b(z)u_y + c(z)u = h(x,y), (1),$ which belongs to the class $C^{\infty I}$ (\widetilde{D}) and satisfies the boundary condition real constant matrices of the order n; a(z), b(z), c(z) are real quadratic matrices of the order n in D. The system (1) is called elliptic, if det C # 0 and the character- $\det (A + 2B\lambda + C\lambda^2) = 0 \quad .$ istic equation UDC: 517.946 Card 1/2

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ACC NR: AP6033117

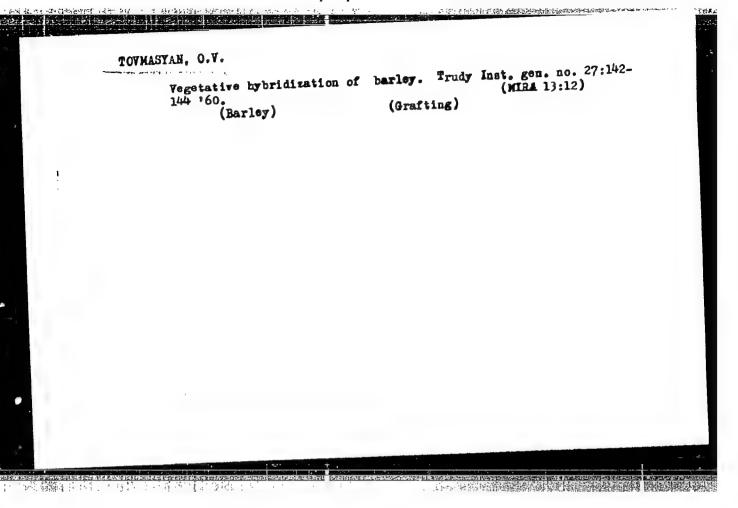
has no real roots. The author discusses the case when Eq. (3) has only simple roots. Let $\lambda_1,\ldots,\lambda_n$ be the roots of Eq. (3) with positive imaginary parts, and δ_ζ the n-dimensional vector which is the solution of the algebraic equation

 $(A + 2B\lambda_h + C\lambda_h^2)\delta_h = 0.$

Then the logatinskiy condition for the present problem is stated as follows: the vectors $\delta_1, \ldots, \delta_n$ must be linearly independent. The author analyzes the problem when this condition is not fulfilled and shows that the solubility of the system (1) and (2) depends on the coefficients a(z), b(z), c(z) which must be subjected to certain conditions. Orig. art. has: 78 equations.

SUB CODE: 12/ SUBM DATE: 04Jan65/ ORIG REF: 005

Card 2/26/2



THE STATE OF THE PROPERTY OF T

USSR/General Biology - Genetics. Genetics of Plants.

В

Abs Jour

: Ref Zhur Biol., No 6, 1959, 23663

Author

: Tovmasyan, O.V.

Inst

: Academy of Sciences, Armenian SSR

Title

: The Inheritance of Characteristics of Two Pollinizers

in Corn.

Orig Pub

: Izv. AN ArmSSR, Biol. i s.-kh. n., 1957, 10, No 4, 53-60

Abstract

: The author has pollinated corn with a mixture of pollen of two kinds with different staining of seeds. From his obtained results, he concludes that the degree of manifestation of characteristics of two pollinizers in each separate ear and in various plants and under different methods of pollinization appear unequally. The individual reaction of plants to the process of fertilization, which is realized by the mixture of pollen, appears more

Card 1/2

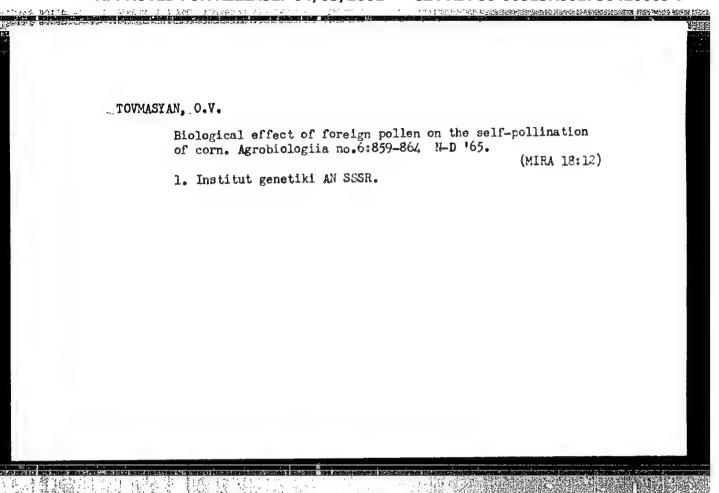
.. 24 --

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TOVMASYAN, O.V.

影響原設

Frost resistance of corn of various origins during seed germination. Trudy Inst. gen. no.31:163-175 104.



GLUSHCHENKO, I.Ye.: TOYMASYAN, O.V. Charles Darwin and some problems related to the of plants. Trudy Inst. gen. no. 27:234-245 160.

(MIRA 13:12) Charles Darwin and some problems related to the fertilization

(Plant breeding)

CIA-RDP86-00513R001756420009-7" APPROVED FOR RELEASE: 04/03/2001

TOWASTAN. O.V.

Inheritance of the characters of two pollinator varieties in corn.
Agrobiologiia no.2:25-30 Mr-Ap '57. (MLRA 10:5)

1.Institut genetiki Akademii nauk SSSR.
(Corn breeding) (Fertilization of plants)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

USSR / General Biology - Genetics.

В

Abs Jour: Ref Zhur-Biol., No 9, 1958, 38067.

Author : Toymasyan, O. V.

: Not given. Inst

: Inheriting Features of Two Pollinator Variet-Title

ies of Corn.

Orig Pub: Agrobiologiya, 1957, No 2, 25-30.

Abstract: Variety Sterling, belonging to the group of white

toothlike corn, was pollinated with a pollen mixture of varieties with a markedly different grain coloring-Rumynskaya yellow, Minnesota 13, Vengerskaya black, and Sakharnaya black. Along with the colored F₁ grains on the same cobs a small quantity of white grains developed. The author denies the possibility of their parthenogenetic generation, since in checking the descendants of

Card 1/2

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28

USSR / General Biology - Genetics.

В

Abs Jour: Ref Zhur-Biol., No 9, 1958, 38067.

Abstract: the white grains obtained by pollination with

pollen of yellow and black corn, these were generally found to be hybrid. It is concluded that grains of the maternal type are formed as a result of fertilization of two paternal forms by

the pollen.

Card 2/2

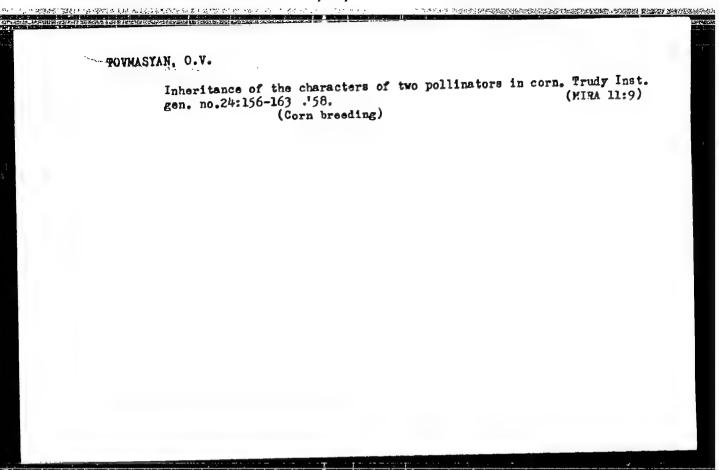
"APPROVED FOR RELEASE: 04/03/2001

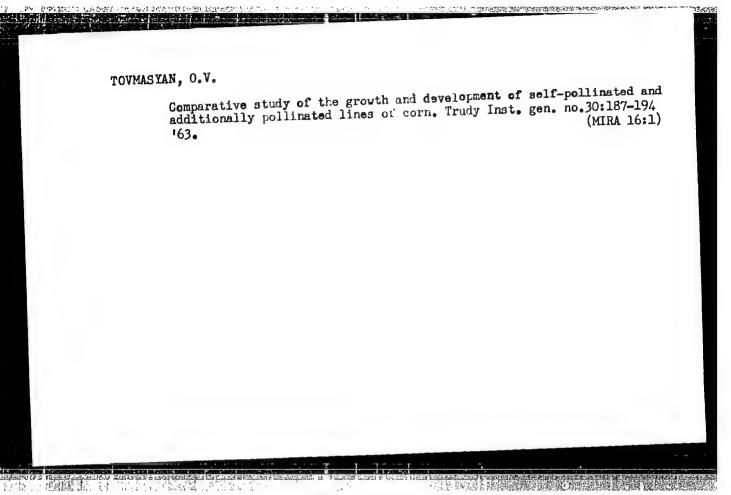
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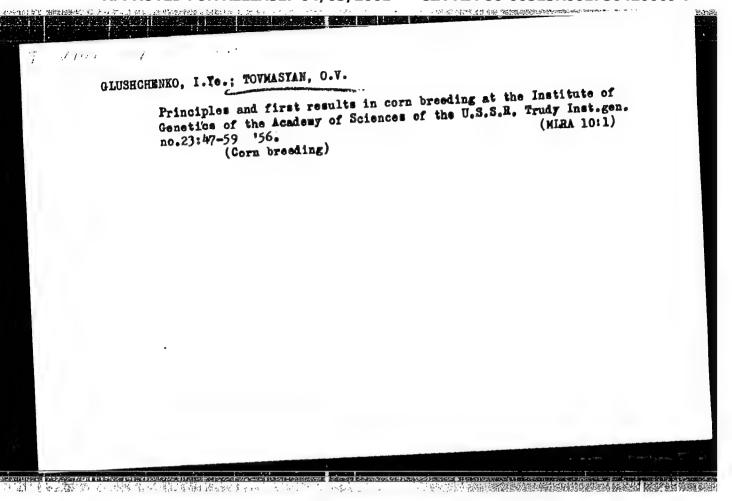
GLOUSHCHENKO, I.E. and TOVMAS AN, O.V.

"The Mentoring Action of the Foreign Pollen in Self-pollinating Corn Lines."
Paper submitted for the Intl. Botanical Congress, Montreal, Canada, 19-29 Aug 1959.

Institute of Genetics, Academy of Sciences U.S.S.R., Moscow.

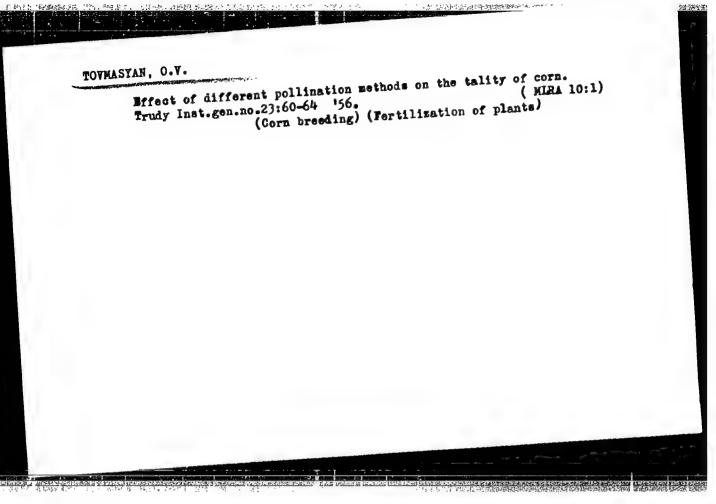






"APPROVED FOR RELEASE: 04/03/2001

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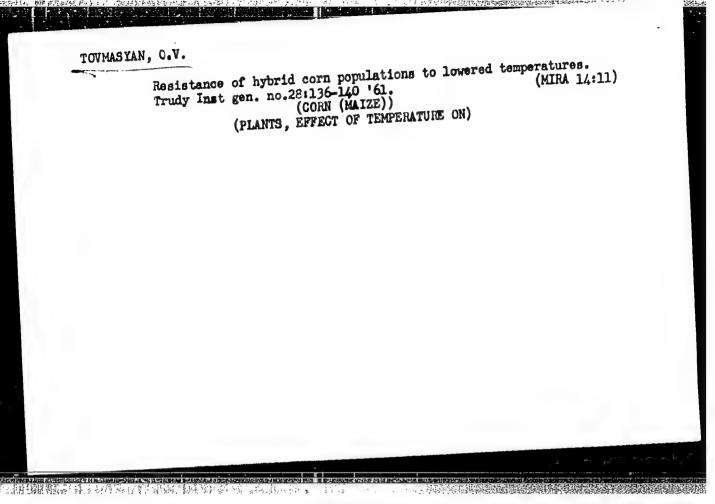


Cold resistance of hybrid corn populations. Agrobi lcgiia
no.2:298-301 Mr-Ap '61.

1. Institut genetiki Akademii nauk SSSR.
(Corn(Maize)) (Plants—Frost resistance)

"APPROVED FOR RELEASE: 04/03/2001 CIA-

CIA-RDP86-00513R001756420009-7



TOVMASYAN, O.V.

Cold resistance of germinating corn seeds. Agrobiologia 5:766-773
(MIRA 17:11)
S-0 '64.

1. Institut genetiki AN SSSR.

S/670/62/000/029/002/006 D291/D307

A STATE OF THE PROPERTY OF THE

AUTHOR:

Tovmasyan, 0.V.

TITLE:

The effect of single and repeated X-ray doses on

the growth and development of maize

SOURCE:

Akademiya nauk SSSR. Institut genetiki. Trudy.

no. 29, 1962, 178-184

TEXT: Dry seeds of a midlate variety, Sterling zubovidnyj, and two early varieties, Belyaroye psheno and Rumynskaya zheltaya, were exposed to X-ray doses ranging from 1,000 to 24,000 r one month prior to sowing in 1957. The effects on different dosages on the growth and development of plants from the treated seeds and from untreated control seeds were recorded noting varietal differences in response. In Sterling and Rumynskaya zheltaya, the 1000-2000 r doses stimulated growth and reduced the length of the vegetative period. In Belyaroye psheno, the same doses increased percent germination and survival. Higher doses generally delayed growth, caused developmental anomalies and reduced grain set. It was noted that Card 1/2

The effect of single ...

S/670/62/000/029/002/006 D291/D307

only Sterling survived the highest dose, while Rumynskaya zheltaya failed to survive doses of 14,000 r or more. Tests in 1953 on Sterling showed that the stimulating effect of a 2000 r dose was inherited by plants of the following generation. However, this dosage rate depressed growth when seeds of Sterling were exposed to it in two successive seasons and the adverse effects of the 4000 r rate were substantially increased when irradiation was similarly repeated. The 4000 r dose was shown to decrease in size and to increase the sterility of pollen grains of Sterling, the effects which were augmented with the double irradiation treatment. There are 4 figures and 6 tables.

Card 2/2

TOWMASYAN, 0.V.

Effect of single and repeated X-ray irradiation on the growth and development of corn. Trudy Inst. gen. no.29:178-184, 162.

(MIRA 16:7)

(Plants, Effect of X-rays on)

(Corn(Maize))

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

of the of the control of the control

S/081/62/000/024/064/073 B166/B186

AUTHORS:

Gevorkyan, Kh. O., Tovmasyan, P. A.

TITLE:

Study of tuff - clay ceramic masses

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1962, 573, abstract 24K245 (Sh. nauchn. tr. Yerevansk. politekhn. in-t. Yerevan.

1960, 223 - 236)

TEXT: Three varieties of tuff (tuff lavas, volcanic tuffs and felsite tuffs) were studied with a view to making use of tuff fines (quarry waste) in ceramics. It was established that with respect to its fusibility and the results of testing the physical and mechanical properties of burned specimens tuff should be included in the group of fusible, non-ductile ceramic raw materials. Ceramic masses based on $\leq 50\%$ tuff and clay are sintered at 1050 - 1150°C. Firing at >1150°C causes deterioration of the physical and mechanical properties of articles and gives rise to swelling. The optimum physical and mechanical properties of the body are obtained with a 20 % tuff content in the ceramic mass. |Abstracter's note: Complete translation. Card 1/1

OEVORKYAN, Kh.O.; TOVMASYAN, P.A.

Use of Shorzha serpentite in ceramics. Izv.AH Arm.SSR. Khim.nauki
11 no.2:83-94 '58.

1. Yerevanskiy politekhnichaskiy institut imeni K.Marksa.

(Serpentites) (Ceramic materials)

USSR / Human and Animal Physiology (Normal and Pathological). T General Problems.

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 59963

Author : Shchukuryan, K. G.; Tovmasyan, R. A.; Tarverdyan, A. N.

Inst : Republican Clinical Hospital of ArmSSR

Title : Several Data on the Effect of the Irritation of the

Vestibular Analysor Upon the Secretory Function of the

Stomach

Orig Pub : Sb. nauchn. tr. Resp. klinich. bol'nitsy ArmSSR, 1957,

1, 529-531

Abstract : After rotation in the Barany chair with a speed of 10

rev/20 sec., a parasympathetic effect appeared in 23 and 38 subjects (increase in the quantity of gastric secretion and the content of total, free and bound HCl), in 7 persons a sympathetic effect was observed (decrease in secretion and acidity), and in the remaining ones there was no reaction to the rotation. -- T. G. Beteleva

Card 1/1

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一个公司。

TOVMASYAN, Suren Akopovich_

[Report by Comrade N.S.Khrushchev at the 21st Congress of the CPSU entitled "Control figures in the development of the national economy of the U.S.S.R., 1959-1965" and tasks of the Communist Party of Armenia] Tezisy doklada tovarishcha N.S.Khrushcheva na XXI s"ezde KPSS "Kontrol'nye tsifry razvitiia narodnogo khoziaistva SSSR na 1959-1965 gody" i zadachi Kommunisticheskoi partii Armenii; doklad na vneocherednom XX s"ezde Kommunisticheskoi partii Armenii 10 ianvaria 1959 goda. Erevan, Armianskoe gos. izd-vo, 1959. 72 p. (MIRA 14:9)

(Armenia-Economic policy)

STEPANYAR, G.G.; TOWNSLYAR, S.A.; STEPHEN, Ye.f.

Mechanism of the action of natural gustric jobs on the axiss organism. Izv. AN Arm. John Biol. nauki 17 no. (MRA 17:10)

1. Kafedra fiziologii Yerevanskogo zorveterinar ogo instituta.

TOVMASYAN, S.S.

Automation and the problem of the professional division of labor.

Izv.AN Arm.SSR.Obshchestv.nauki no.3:35-46 Mr *60. (MIRA 13:7)

(Automation) (Division of labor)

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APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

ZLOMANOV, Leonid Pavlovich, kand. ekonom. nauk; DUBROVSKIY, Yu.N., red.; TOVMOSYAN, M.Ye., red.; NAZAROVA, A.S., tekhn. red.

[Economic relations between city and village during the large-scale building of communism] Ekonomichaskie sviazi goroda i derevni v period razvernutogo stroitel stva kommunizma. Moskva, Izd-vo "Znanie," 1962. 44 p. (Novos v zhizni, nauki, tekhnike. III Seriia: Ekonomika, no.1) (MIRA 15:4) (Agricultural policy)

CIA-RDP86-00513R001756420009-7

ALEKSANDROVSKIY, A.; RUSSKIY, A.; TOVMOSYAN, M.Ye., red.; RAKITIN, I.T., tekhn. red.

[Bourgeois economics at the present-day stage] Burzhuaznaia politicheskaia ekonomiia na sovremennom etape. Moskva, Izd-vo "Znanie," 1962. 47 p. (Novoe v zhizni, nauke, tekhnike.

III Seriia; Ekonomika, no.2) (MIRA 15:4)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

VOINOV, Arkadiy Mikhaylovich, kand. ekonom. nauk; TARNOVSKIY, Oleg Ivanovich, kand. ekonom. nauk; TOVMOSYAN, M.Ye., Yed.; RAKITIN, I.T., tekhn. red.

[Toward a common aim with a united front; on the economic cooperation of socialist countries] Edinym frontom k edinoi tseli;
ob ekonomicheskom sotrudnichestve sotsialisticheskikh stran.
Moskva, Izd-vo "Znanie," 1961. 46 p. (Vsesoiuznoe obshchestvo
po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.3,
no.23/24)

(MIRA 15:2)

(Communist countries—Foreign economic relations)

"APPROVED FOR RELEASE: 04/03/2001 CI

CIA-RDP86-00513R001756420009-7

MANEVICH, Yefim L'vovich, doktor ekonor. naur, prof.; TOVMOSYAN, M.Ye., red.; NAZAROVA, A.S., tekhn. red.

[Mental and physical work] Trud umstvennyi i trud fizicheckii v period rezvernutogo stroitel stva kommunizma. Moskva, Izd-vo "Znanie," 1961. 47 p. (Vsecoiuznoe obshchestvo po rasprostraneniiu politicheskikh i neuchnykh znanii. Ser.3, Ekonomika, no.19) (MIRA 14:11)

(Work)

AGABABYAN, Sh.M., doktor sel'skokhozyaystvennykh nauk; TOVMASYAN, V.S.

Obtaining two crops of hay from mountain meadows. Trudy Arm.
nauch.-issl. inst.zhiv. i vet. 4:169-177 '60. (MIRA 15:5)

(Armenia--Pastures and meadows)

26682 Transpal peoral nava ekstraktriya katarakty. Oftalmal furmal, 149, No. 3 s. 137-38
So: LETOPIS' No. 35, 1949

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SZAIANTAY, Inszlo, Br.; TOVOIGYI, Bela, Dr.

Articular osteochondromatosis. Orv. hetil. 99 no.10:356-357 9 Mar 58.

1. A Fejermegyei Tanacs Korhaz-Rendelointezet (vezeto-foorvos: Berath Iatvan dr.) I. sz. Sebeszeti szakrendelesenek (szakrendeles-vezeto: Tovolgyi Bela dr.) kozlemenye.

(OSTZOMA, case reports osteochondromatosis of articular capsules of elbow & shoulder joints (Hun))

(ZIBOW, dis. osteochondromatosis of articular capsules of elbow & shoulder joints, case report (Hun))

(SHOULDER, dis. same)

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TOVORNIKOVA, D.; TRPIS, M.

 F_{a} unistic, ecologic, and zoogeographic remarks on mosquitos in Slovenia, Yugoslovia. In G_{e} rman. p. 721

BIOLOGIA. (Slovenska akademia vied) Bratislava, Czechoslovakia, Vol. 13, no. 10, 1958

Monthly list of East European Accessions (EEAI), LC, Vol. 8, no. 11, Nov. 1959 $U_{\rm n}{\rm cl.}$

RRELIH, Savo; TOVORNIK, Danica

Mallophaga of Yugoslavia. Pt.2. Biol west no.10:85-100

1. Prirodoslovni muzej v Ljubljani i Zavod IRS za zdravstveno varstvo.

BRELIH, Savo; TOVORNIK, Danica

Bird lice (Malophaga) of Yugoslavia. Pt.3. Biol vest 11: 97-106'63.

1. Prirodoslovni muzej v Ljubljani, Zavod SRS za zdravstveno varstvo.

BRELIH, Savo; TOVORNIK, Danica

Contribution to the knowledge of the bird lice (Mallophaga) of Yugoslavia.I. Biol vest 9:93-107 '61.

1. Prirodoslovni muzej v Ljubljani. Zavod Ljudske republike Slovenije za zdravstveno varstvo.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

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Lord... Comercija cac. dv. Seas Cvantel; in folcijala Eliaika mentalaze fakeltota v Ljubljani (Predstojnik; prof. dr. d. periosia).

TOVORNIK, Danica; BRELIH, Save

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Biologic studies in the endemic areas of tick-borne encephalitis in Slovenia up to 1963. Biol inst 12:115:40 64.

Mallophaga of Yugoslavia. Pt. 4. Ibid.:121-127

1. Virus laboratory of the Institute of Health Protection of Slovenia, Ljubljana (for Tovornik). 2. Museum of Natural Sciences of Slovenia, Ljubljana (for Brelih). Submitted July 31, 1964.

TOVORNIK, Danica
SURTIAME (in cupu); Given Names
Country: Yugoslavia

Academic Degrees: not given,

Affiliation: not given /

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Source: Ljubljana, Zdravstveni vestnik, No 3-4, 1961, pp 93-95.

Nata: "Course on Natural Focuses of Infections." (USSR Aug. 15-Sept. 18, 1960.)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

一点,大学生创新的重要的**是一种企业的**

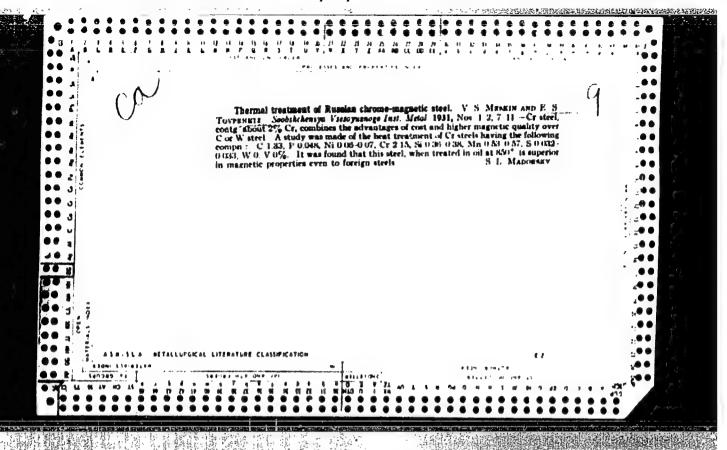
TOVPENETS, V.Ye., inzh.

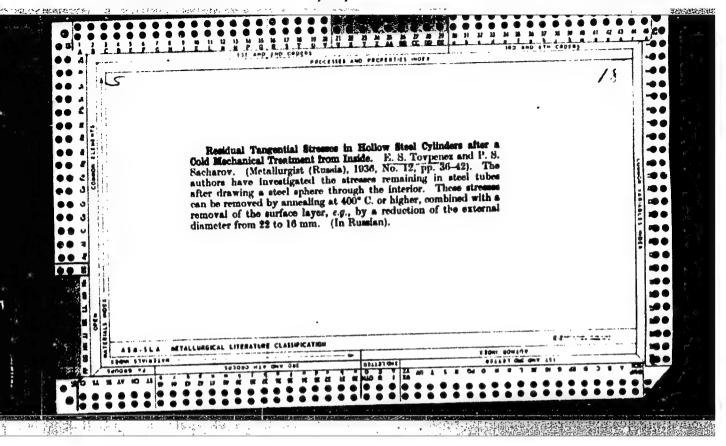
Shortcomings of K.V. Ruppeneit's book ("Rock pressure and displacement in flat coal seam longwalls". Ugol' 34 no.11:45-46 N '59 (Subsidences(Earth movements)) (MIRA 13:3)

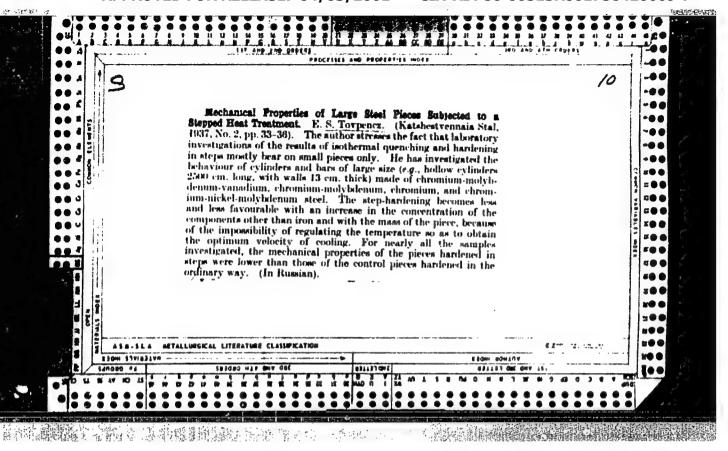
EALASHOVA, N.N.; SMAGUNOVA, N.A.; TOVPINETS, Te.I.

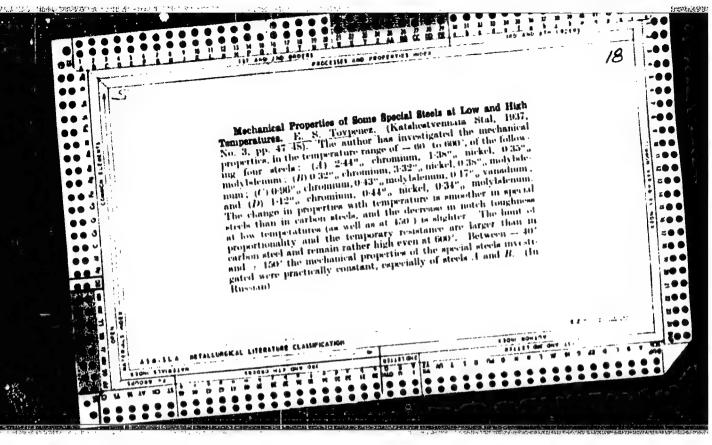
Reducing the porosity of hickel coatings. Priborostroenie no.
2:12-13 f '64.

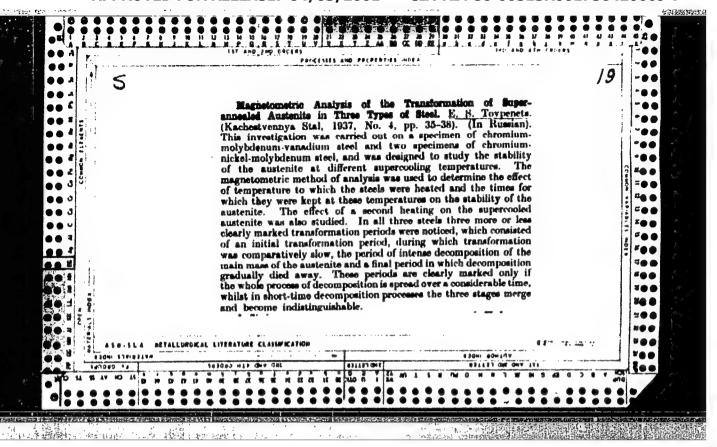
(MIRA 17:3)

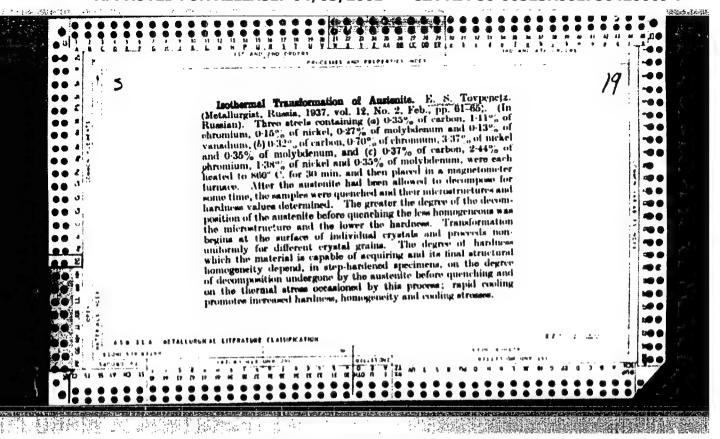






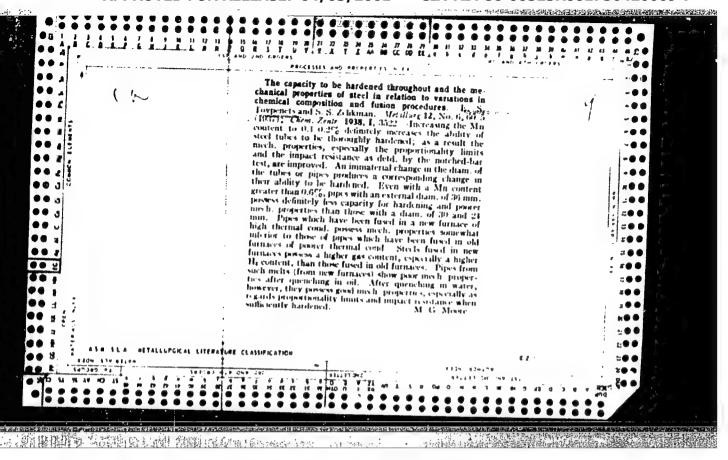






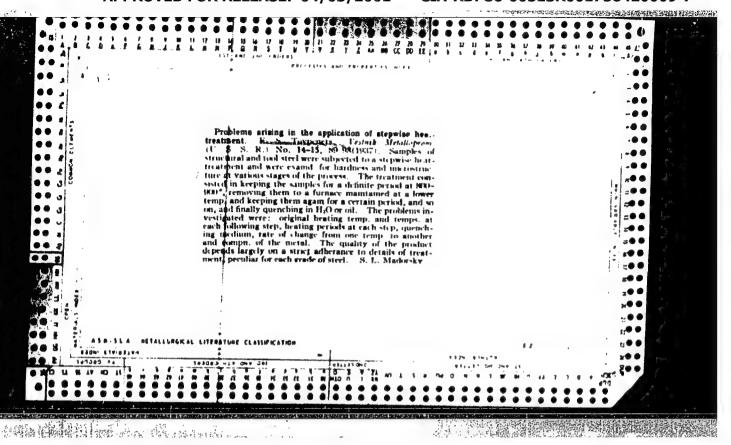
"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756420009-7



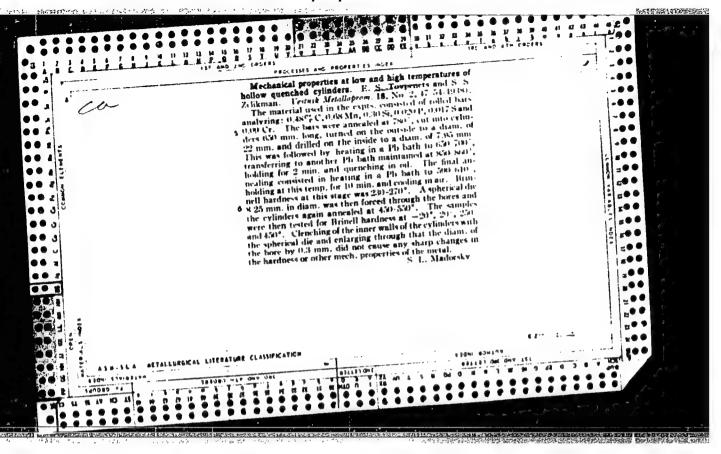
"APPROVED FOR RELEASE: 04/03/2001

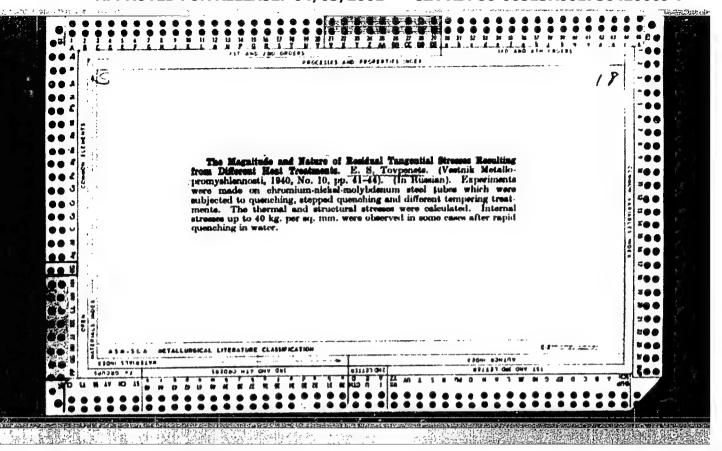
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TOVPENETS, Ye.S., kandidat tekhnicheskikh nauk; PISKUN, V.I., inzhener; SHLEPCHENKO, L.B., inzhener; GULYACHENKO, P.P., inzhener; LEONOV, L.I., inzhener; POTAPOV, I.F., inzhener.

Improving the quality of the cutting teeth of cutting machines and of combined mining machines. Ugol' 29 no.10:23-26 0 '54. (MLRA 7:11)

打倒的 在世界的 电计算指令法 经收益的 多少年的

TOVPENETS, Ye,S., kandidat tekhnicheskikh nauk.

Study of isethermic annealing of certain alleyed steels. Metalleved. i dr. met. no.2:53-56 F *56. (MIRA 9:7)

1.Denetskiy industrial'nyy institut imeni N.S.Khrushcheva. (Steel alleys--Heat treatment)

133-7-20/28

AUTHOR: Tovpenets, Ye.S., Candidate of Technical Sciences.

TITLE: The Influence of Heat-treatment Practice on the Stability of Super-cooled Austenite. (Vliyaniye rezhima termichezkoy obrabotki na ustoychivost' pereokhlazhdennogo austenita)

PERIODICAL: Stal', 1957, No.7, pp. 642 - 643 (USSR)

ABSTRACT: The influence of heat-treatment practice (temperature, soaking time, velocity of cooling) on the stability of supercooled austenite, on the kinetics of its transformation and on the nature of the products obtained was studied. Chemical composition of steels investigated 40XH, 40XHM, 35XHM, 18XHBA and UX15 is given in Table 1. Heat-treatment conditions and experimental results are given in Table 2 and Figs. 1 and 2. There are 2 tables, 2 figures and 3 Slavic references.

ASSOCIATION: Donets Industrial Institute (Donetskiy Industrial nyy AVAILABLE: Library of Congress.

Card 1/1

TOVPENETS, YE. S.

Tovpenets, Ye. S. and Piskun, V. T. "The mechanical properties of U7A, 9XZ, 7XZ, 65G and 6XS (EI 325) steels," Trudy Stalinskogo obl. otd-miya VNITOM, No. 1, 1949, p. 104-06

SO: U-52hl, 17 December 1993, (Letonis "Zhurnal "nykn Statey, No. 20, 1/hd)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

· CHENNESS

Efficient of quenoning conditions during the hardening of row reinforcements in the rolling process or the mechanical properties of these reinforcements. Zzv.vyc.ucrab.nav.; chern.met. 8 no.8:123-129 (MIRA 18:8)

Denetakiy politekhniches dy institut.

心。据得数心

TOVPENETS, Ye.S., kand. tekhn. nauk; IVASHCHENKO, V.M., inzh.; STYCHINSKIY, L.P., inzh.; ZHUKOV, A.I., inzh.; MERSHCHIY, N.P., inzh.; KORENEV, K.I., inzh.; SHUMEYKO, R.I., inzh.; IVANOV, P.I., inzh.

Mechanical properties of reinforcement rods after heat treatment from the rolling process temperature. Stal' 25 no.2:157-160 (MIRA 18:3) F '65.

1. Donetskiy politekhnicheskiy institut; Makeyevskiy metallurgicheskiy zavod; Nauchno-issledovatel'skiy institut "Donpromstroy" i Novo-Kramatorskiy zavod tyazhelogo mashinostroyeniya.

TOVPENETS, Ye.S.

Effect of therms' 'roatment conditions on the mechanical properties of reinforcement rods. Metalloved. i term.obr.met. no.1:30-32 Ja '65. (MIRA 18:3)

1. Donetskiy politekhnicheskiy institut.

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7

一个一个人们的自己的问题是这些性情况和**是是不是是不是一个是是是是不是是是是是是是是是是**

TOVPENETS, Yemel'yan Semenovich; RAYTBURD, L.L., red.; STARODUB, T.A., tekhn. red.

[Heat treatment of rolled products and forgings]Termicheskaia obrabotka prokata i pokovok. Kiev, Gostekhizdat USSR, 1962. 155 p. (MIRA 15:12)

(Rolling (Metalwork)) (Steel forgings—Heat treatment)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

基份自動於數學的表示資本的發展影響表示在1957

TOVPENETS, Ye.S., kand.tekhn.nauk; IVANOV, F.I., inzh.; GONTAR', M.A., inzh.

Effect of quenching conditions during the reduction [sic] of steel on the amount of residual austenite. Metalloved. i term. obr. met. no.5:8-12 My '62. (MIRA 15:5)

1. Donetskiy politekhnicheskiy institut.
(Steel--Quenching) (Annealing of metals)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

S/123/62/000/008/003/016 A004/A101

1.1710

AUTHOR:

Tovpenets, Ye. S.

TITLE:

The effect of the heat-treatment conditions of grade 35 steel blanks

on their mechanical properties

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 8, 1962, 17, abstract

'8A111 ("Tr. Donetsk. politekhn. in-ta", 1961, v. 56, 143-145)

TEXT: The author compared the mechanical properties ($6_{\rm p}$, $6_{\rm s}$, δ , $a_{\rm k}$ and HNC) of grade 35 steel heat-treated by rolling heating with the properties of specimens which were heat-treated at various conditions. The test results revealed that the optimum condition is quenching in hot water at 820°C with tempering at 670°C. In this case a_k is twice as high as that of rolled material. Hardening by rolling heating with high tempering improves the properties in the same degree as after a special heat treatment, with the exception of ak.

[Abstracter's note: Complete translation]

Card 1/1

5/137/62/000/004/090/201 A052/A101

18.7500

AUTHOR:

Tovpenets, Ye. S.

TITLE:

Magnetometric analysis of supercooled austenite transformation at

alloyed steel annealing

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 15, abstract 4194

("Tr. Donetsk. industr. in-ta", no. 32, 1958, 45-58)

The effect of annealing temperature and cooling conditions on the TEXT: stability of supercooled austenite in 40 KH (40KhN) and 5 KHT (5KhNT) steels was investigated by the magnetometric and microstructure methods and by measuring the microhardness. It is established that with the increase of the austenizing temperature the stability of austenite increases. The maximum austenite stability in the perlite region is observed at a step isothermic annealing. Under oscillating cooling conditions the effect of austenizing temperature weakens. The effect discovered is ascribed to the fact that under isothermic conditions, owing to a continuous presence of the metal in the high temperature region, favorable conditions are created for diffusion processes and for the separation

Card 1/2

型品的基础的分配的工程。由自己的工程的企业的工作的工作。

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756420009-7

S/137/62/000/004/090/201 A052/A101

Magnetometric analysis ...

of decomposition products of supercooled austenite. There are 12 references.

A. Fedorovskiy

[Abstracter's note: Complete translation]

Card 2/2

\$/137/62/000/002/062/144 A006/A101

AUTHOR:

Tovpenets, Ye. S.

TITLE:

Changes in the linear dimensions of cylindrical specimens depending

on heat treatment conditions

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 6, abstract 214/4

("Tr. Donetsk. industr. in-ta", 1958, 32, 73 - 87)

The author investigated 15 different structural steel grades. It is TEXT: shown that with higher heating temperature and degree of alloying the steel, the stability of supercooled austenite increases, and its full decomposition is not always completed after 3 hour tempering at 640 - 660°C with subsequent stepped cooling, but also during variation cooling according to scheme $T_{\rm aust}$ 250°C \Rightarrow \rightarrow 650°C \rightarrow 20°C. With a higher stability of supercooled austenite, the sensitivity of the steel to changes in dimensions increases as a result of heat treatment. When cooling steel with stable austenite, in the upper sub-adjacent temperature region, under stepped conditions with holding at 640 - 660°C, changes in the dimensions are much greater than in variation cooling.

[Abstracter's note: Complete translation]

L. Vul'f

Card 1/1

5/137/61/000/011/093/123 A060/A101

AUTHOR:

Tovpenets, Ye. S.

TITLE:

Effect of the cooling conditions in annealing steels 60 XF, 9X, 9 XΦ, 9XMΦ, and 9 XCΦ (60KhG, 9Kh, 9KhF, 9KhMF, and 9KhSF) upon

their toughness

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1961, 12, abstract

11166 ("Tr. Donetsk. industr. in-ta", 1958, 32, 59-72)

The author investigated the effect of the heat-treatment conditions of the steel for hot and cold rolling rolls upon its toughness. It was established that steel grades 60KhG, 9Kh, 9KhF, 9KhMF, and 9KhSF possess a high sensitivity with respect to ak change not only with changes in the heating temperature, but also with changes of the cooling conditions during annealing. As the heating temperature and the supercooling temperature are raised, the ak is lowered. Tempering of the steel after annealing raises the ak independent of the conditions of the latter. Steel 9Kh and 60KhG are distinguished by a notable tendency to tempering brittleness. The optimum annealing conditions

Card 1/2

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756420009-7

S/137/61/000/011/093/123 A060/A101

Effect of the cooling conditions ...

after forging consist of heating up to 950 $^{\circ}$ C soaking at that temperature, and fluctuating cooling with supercooling down to 200 $^{\circ}$ C, heating up to 780 - 820 $^{\circ}$ C, repeated supercooling to 200 $^{\circ}$ C, and heating up to 650 $^{\circ}$ C.

🖰, Fedorova

[Abstracter's note: Complete translation]

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7

TOVPENETS, Ye.S.; YUDOVICH, S.Z.

Formation of flakes in steel during the time of its inspection for flakes. Izv.vys.ucheb.zav.; chern.met. 4 no.6:134-138 161. (MIRA 14:6)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420009-7

TOVPENETS, Ye.S.; PISKUN, V.T.; KATENBERG, A.R.

建设的原理的设置。

Effect of the conditions of cooling on the mechanical properties of rolled bulb-angle strip made of 4S and SKhL-4 steels. Izv.vys. ucheb.zav.; chern.met. no.4:114-118 *61. (MIRA 14:4)

1. Donetskiy industrial'nyy institut i Stalinskiy metallurgicheskiy zavod.

(Rolling (Metalwork)) (Steel-Heat treatment)

s/148/61/000/006/011/013 E073/E435

Tovpenets, Ye.S. and Yudovich, S.Z.

On the formation of flakes in steel during the process AUTHORS:

of investigation of the steel for flakes TITLE:

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya

metallurgiya, 1961, No.6, pp.134-138

Several authors pointed out that flakes may form in steel during the process of investigation for flakes and as a result of TEXT: that perfectly good metal, which has a high sensitivity to the Therefore, present methods formation of flakes, may be scrapped. of testing steel for flakes have to be changed and for this The here described purpose additional experiments are necessary. experiments were carried out with the steels 18XHBA (18KhNVA) and MX15 (ShKh15). Specimens were cut, after the termination of the rolling, from blanks of the following cross-sections: $152 \times 152 \text{ mm}$, $150 \times 150 \text{ mm}$, $125 \times 125 \text{ mm}$ and 150 mm dia., were notched to half the cross-section in the hot state and air and water quenched to 20°C. Half of the specimens of each batch were fractured by means of a 1/2-ton hammer the second day after Card 1/4

On the formation of flakes ...

S/148/61/000/006/011/013 E073/E435

cooling and the most characteristic fractures were photographed. The specimens which had not fractured were notched with an acetylene flame and again fractured. Two to three days later the second half of the specimens was subjected to the following heat treatment: high temperature tempering at 700°C for 4 hours followed by slow cooling in the furnace to 400 - 600°C and then in The total duration of the tempering was 16 to 20 hours. The specimens which were previously tested under the hammer were subjected to the same tempering conditions so as to facilitate cutting of discs for flake investigations. from the middle part of the specimen and from the individual 25 mm discs were cut discs metallographic specimens were cut for determining the microstructure, hardness and microhardness. that all the specimens from certain heats of both steels were The results have shown highly insensitive to flake formation. Even after water quenching and fracturing under the hammer they showed cracks but not flakes. The cause of differing sensitivities to flake formation is attributed to differing hydrogen contents of the Specimens of both steels from other heats had a higher Card 2/4

S/148/61/000/006/011/013 E073/E435

On the formation of flakes ...

Card 3/4

sensitivity to the conditions of cooling after rolling: for one steel, water quenched specimens showed large flakes and quenching cracks, whilst air quenched specimens only showed fine flakes and specimens which were tempered at 700°C after water quenching showed quenching cracks but no flakes. The specimens of the other steel from a specific heat showed flakes regardless of the heat treatment conditions. The following conclusions are arrived at: 1. Formation of flakes in steel under the influence of mechanical effects is only possible if it contains microvolumes of increased brittleness (martensite). 2. Mechanical effects during taking and treatment of the specimens increases the possibility of flake formation. 3. For steels that are sensitive to flake formation, the method of taking specimens for flake investigations has to be changed so as to reduce the mechanical effects on the metal. 4. If flakes detected in the specimens have not otherwise shown up, the metal should be additionally heat treated (high temperature tempering or annealing) so as to eliminate the foci of increased brittleness of the metal.

On the formation of flakes ...

5/148/61/000/006/011/013 E073/E435

B.I.Golubchik and M.A.Klyachkina participated in the experiments. There are 3 figures and 5 Soviet references.

ASSOCIATIONS: Donetskiy industrial'nyy institut i

Zaporozhskiy mashinostroitel'nyy institut

(Donets Industrial Institute and

Zaporozhe Engineering Institute)

SUBMITTED:

July 15, 1960

Card 4/4

TOVPENETS, Ye.S.; VYPOV, G.P.

Possibility of floc formation in steel as a result of its brittle dynamic fracture. Fiz. met. i metalloved. 11 no. 1:95-99 Ja '61. (MIRA 14:2)

1. Donetskiy industrial'nyy institut. (Steel-Metallography)

TOVPENETS, Ye.S., dots., kand.tokhn.nauk

Temper brittleness of pearlitic steel after annealing. Izv.vys.uchet. zav.; chern.net. no.11:105-113 N '58. (MIRA 12:1)

 Donetskiy industrial nyy institut. Rekomendovano kafedroy metallovedeniya i termicheskoy obrabotki. (Steel--Brittleness) (Annealing of metals)

TOVPERETS, Ye.S., kand.tekhn, nauk

Cooling forgings made of flake-susceptible steel. Metalloved.
i obr.met. no.2:7-13 F '59. (MIRA 12:2)

1. Donetskiy industrial nyy institut.
(Steel forgings--Cooling) (Steel--Metallography)

公型出版的数据:1911年,1921年,1921年,1921年

SOV/129-59-2-2/16

Tovpenets, Ye.S., Candidate of Technical Sciences AUTHOR:

Cooling of Forgings Made of Flocculation-sensitive Steel TITLE: (Okhlazhdeniye pokovok iz flokenochuvstvitel noy stali)

Metallovedeniye i Termicheskaya Obrabetka Metallov. PERIODICAL:

1959, Nr 2, pp ? - 13 (USSR)

ABSTRACT: If large forgings are made from steel which is highly sensitive to flocculation, the cooling is very slow, in some cases lasting 100 to 150 hours and even longer. As a result of work described in this paper, a fluctuating cooling regime (see graph, Figure 1) was evolved for forgings made of steel with a high sensitivity to flooculation and it is shown that application of this regime accelerates transformation of super-cooled austenite and permits eliminating rejects caused by flocculation. In earlier work (Ref 6), the author and his team have shown that it is advisable to use a fluctuating occling regime nct only for large forgings but also for rolled material. Literary data and practical results obtained in recent years (Refs 6-9) confirm the effectiveness of the fluctuating cooling regime for preventing flake formation

and the superiority of such cooling as compared with slow Cardl/4

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756420009-7"

SOV/129-59-2-2/16

Cooling of Forgings Made of Flosculation-sensitive Steel

or isothermal cocking. At the Nove-Kramaterskiy mashinestreitel nyy zavod im. Stalina (Neve-Kramatersk.: Engineering Works imeni Stalin) large forgings are new being cooled in accordance with the fluctuating temperature regime as shown in the graph. Figure 2. The total duration of the cocling process is 72-170 hours, including all the cycles of temperature rise and temperature fall. The author believes that for flocculation-sensitive steels that cooling regime is most favourable which ensures full completion of the decomposition of the austenita within the shortest possible time in a temperature range in which there is not only a maximum elimination of the hydrogen but also formation of decomposition products with the highest accivity. Practical experience has shown that these conditions are not satisfied by slow cooling. nor by the isothermal regime with stoppage of the cooling in the temperature range corresponding to the first maximum of the speed of decomposition of the super-cooled sustenite. In the case of applying cooling in accordance with the fluctuating temperature regime, the decomposition of the super-cooled austenite will be completed in two to three

Card2/4

SOV/129-59-2-2/16

Cooling of Forgings Made of Flocculation-sensitive Steel

stages, as follows: during cooling to a selected supercooling temperature and holding at that temperature; during subsequent heating from the super-cooling temperature to the Aci temperature and holding at that

temperature; during the final cooling from the Ac,

temperature. The process of decomposition of the austenite, in the case of applying such a cooling regime with accelerated super-cooling, is discussed in detail for steels of the type 35KhNM. The following conclusions are arrived at: the fluctuating regime has considerable advantages as compared with the isothermal regime and ordinary slow cooling. If the fluctuating regime of cooling is used the beginning of the decomposition of the super-cooled austenite will occur in the range of intermediate temperatures and the decomposition will be completed at elevated temperatures in a range where the decomposition products have a nigh dustility. Furthermore, application of such cooling enables removal of the entire excess of dissolved hydrogen at elevated temperatures, improving the uniformity of the microstructure

Card3/4

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SOV/129-59-2-2/16

Cooling of Forgings Made of Flocculation-sensitive Steel

of the steel and thus improving the mechanical properties; it also enables reducing the necessary furnace capacity. There are 5 figures and 12 references, 10 of which are Soviet and 2 German.

ASSOCIATION:

Donetskiy industrial nyy institut (Donets Industrial Institute)

Card 4/4

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86

CIA-RDP86-00513R001756420009-7

TOVPEHETS, Yo.S.; ZARUYEV, V.M.; GOPCHARDIKO, N.I.; BABIY, A.S.

Effect of heat treatment over the heating needed for volling on the mechanical properties of mine rails. Izv.vys.ucheb.mav.; met. no.4:145-15% '60. (MIRA 13:4)

1. Donetskiy industrial'nyy institut.
(Railroads--Rails) (Steel--Heat treatment)

ALSO TO A CONTROL SERVICE SERVICE AND A SERVICE SERVIC

SUV/133-59-4-22/32

AUTHORS:

Tovpenets, W.S., Candidate of Technical Sciences, Goncharenko, H.I., Candidate of Technical Sciences, Babiy, A.S., Engineer, and Shcherbina, G.Z., Engineer

TITLE: Improvement of Mechanical Properties of Reinforcing

Pars by Thermal Treatment (Povysheniye mekhanicheskikh svoystv armaturnoy stali posredstvom termicheskoy

obrabotki.)

PERIODICAL: Stal', 1959, Nr 4, pp 364-367 (USSR)

ABSTRACT:

The possible degree of improvement of mechanical properties of St5 steel by thermal treatment and optimum conditions of such treatment were studied. Specimens from 5 heats were taken for the investigation (chemical

composition - table 1). Parallel specimens were prepared from the usual rods and from rods which passed thermal treatment according to one of the following

seven modifications, °C (in brackets - duration of cooling in water - seconds).

Card 1/4

SUV/133-59-4-22/32

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Improvement of Mechanical Properties of Reinforcing Ears by Thermal Treatment

I	II	III	IV	V	VI	VII
800	800	850	850	900	900	900
(3)	(9)	(5)	(9)	(3)	(9)	(12)

After hardening the rods were annealed at 500, 600, 650, 670 and 690°C. In addition a part of the rods was hardened in water after electric heating (by resistance) to 820 to 850°C and from the temperature of the end of rolling with subsequent annealing at 650°C (the duration of cooling of rods 10 to 12 and 28 mm in diameter on hardening in water was 6 and 20 seconds respectively). The duration of electric heating of rods 12 mm in diameter did not exceed 2-3 minutes at a current of 1200 to 2100 a and 12 v. Tests for strength were done at room temperature and tests for bending and impact strength also at sub zero temperatures. The macrostructure was studied on impact strength specimens in the place of the break. The experimental results are given in tables and figures. It was found that mechanical properties of reinforcing profiles from low

Card 2/4

實際機能 觀察公司 医内部 海绵的复数形式 计二十二十二

SUY/155-59-4-22/32

Improvement of Mechanical Properties of Mainforcing lars by Thermal Treatment

carbon steel St 5 can be substantially improved by hardening with high temperature annealing (not only the tensile and yield strength are improved but also the impact strength particularly at low testing temperatures (up to -80°C see table 3). The influence of welding on the mechanical properties of thermally treated metal is non-uniform and depends on the method of welding (electric are welding completely removes the improvement of mechanical properties obtained by the meat treatment while butt welding only partly removes the beneficial influence of heat treatment). The technico-economic effect of thermal treatment (table 4) with hardening from the temperature at the end of rolling is somewhat lower than on hardening from special heating to 850°C (particularly in respect of impact strength).

Card 3/4

7年,其1000年,1980年,19

SOV/133-59-4-22/32

Improvement of Mechanical Properties of Reinforcing Bars by Thermal Treatment

There are 5 figures, 4 tables and 6 Soviet references.

ASSOCIATION: Donetskiy Industrial nyy Institut i Yenakiyevskiy Metallurgicheskiy Zavod (Donetsk Industrial Institute and the Yenakiyevo Metallurgical Works)

Card 4/4

手指 精制 表现了综合的特别的复数形式的

SOV/137-57-10-19648

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 169 (USSR)

AUTHOR:

Tovpenets, Ye.S.

TITLE:

On the Problem of Controlled Cooling (Annealing) for Prevention of Flakes in Rolled and Forged Components Made of Steel Susceptible to Flake Formation [K voprosu okhlazhdeniya (otzhiga) i kontrolya na flokeny prokata i pokovok iz flokenochuvstivitel'noy stali

chavstiviter noy star

PERIODICAL: Tr. Donetsk. industr. in-ta, 1957, Vol 19, pp 37-46

ABSTRACT:

The author outlines some theoretical principles underlying a method of alternate cooling (annealing) of components made of steel susceptible to flakes. The method consists of the following procedures: 1) Cooling of the article from the temperature at which it was worked under pressure to a temperature of 100-650°C (depending on the degree of alloying of the steel); 2) heating to 820-870°, followed by soaking and accelerated cooling to a temperature of 200-300°; 3) reheating to 650°, soaking of the article at this temperature for a certain period of time,

Card 1/2

SOV/137-57-10-19648

On the Problem of Controlled Cooling

followed by final cooling. The technology described ensures most rapid and complete transformation of supercooled austenite at temperatures 20 to 50° below the Ac_1 point and prevents the formation of flakes in the steel. A number of practical suggestions for realization of the technology outlined above are given. Bibliography: 23 references.

M.Ch.

Card 2/2